

The Partial English Translation of  
Japanese Utility-Model Application No. 04-032902  
(the first reference)

Title of the utility model

A film shrinkage device for a vacuum packaging apparatus

Field of the utility model

This Utility model relates to a film shrinking device for a vacuum packaging apparatus

\*\*\*\*\*omitted\*\*\*\*\*

An object of this utility model is to provide a film shrinkage device for a vacuum packaging apparatus capable of producing a vacuum packed package without space between a film and the good, without crease, with good seal performance, and the package having an appealing appearance.

\*\*\*\*\*omitted\*\*\*\*\*

Fig.1 shows a schematic structure of an example of an automatic vacuum packaging apparatus wherein the present invention is applied. With reference to Fig. 1, a lower film 5 is drawn from the first raw film 4. The lower film 5 is transferred to a forming box 7 wherein the lower film 5 is made to have a concave portion 5a. Although not shown, a product supply means is provided in the advance direction of the forming box 7 and the product supply means supplies a product 10 to the concave portion 5a. There is provided a second raw film 11 at the middle portion of the apparatus, and an upper film 15 is continuously supplied from the second raw film 11 to cover the lower film 5.

Further, ahead of the covering point, there is provided a vacuum chamber 17 wherein air in the concave portion 5a is removed and the contact portion of the lower film 5 and the upper film 15 is adhered by heat located at the circumference of the concave portion 5a. Then the product is conveyed to a film shrinkage device 20 wherein vapor is supplied to the side surface of the concave portion 5a thereby to diminish crease.

\*\*\*\*\*omitted\*\*\*\*\*

Vapor generated by vapor generating device 30 is ejected to the side surface of the concave portion 5a of the lower film as shown in Fig. 2.